

R317. Environmental Quality, Water Quality.

R317-10. Certification of Wastewater Works Operators.

R317-10-1. Objectives.

The certification program is established in order to assist in protecting the quality of waters in the state of Utah by helping ensure that personnel in charge of wastewater works are trained, experienced, reliable and efficient; to protect the public health and the environment and provide for the health and safety of wastewater works operators; and to establish standards and methods whereby wastewater works operating personnel can demonstrate competency.

R317-10-2. Scope.

These certification rules apply to all wastewater treatment works and sewerage systems, with the exception of [~~Individual~~] Onsite Wastewater [~~Disposal~~] Systems and Large Underground Wastewater Disposal Systems as defined in R317-1-1. This includes both wastewater collection systems and wastewater treatment systems except underground wastewater disposal systems. Wastewater works operated by political subdivisions must [~~have~~] employ certified operators as required in this rule. Operators of wastewater systems not requiring certified operators (such as industrial wastewater treatment systems) may be certified according to provisions of these rules for testing and certification.

R317-10-3. Authority.

The Certification Program for Wastewater Works Operators is authorized by Section 19-5-104 of the Utah Code Annotated.

R317-10-4. Definitions.

- A. "Board" means the Water Quality Board.
- B. "Category" means type of certification (collection or wastewater treatment).
- C. "Certificate" means a certificate issued by the Council, stating that the recipient has met the minimum requirements for the specified operator grade described in this rule.
- D. "Certified Operator" means a person with the appropriate education and experience, as specified in this rule, that has successfully completed the certification exam or otherwise meets the requirements of this rule.
- E. "Chief Operator" means the supervisor in direct responsible charge of all shift operators for a collection or treatment system.
- F. "Collection System" means the system designed to collect and transport sewage from the beginning points that the collection entity regards as their responsibility to maintain and operate, to the points where the treatment facility assumes responsibility for operation and maintenance.
- G. "Council" means the Utah Wastewater Operator Certification Council.
- H. "Continuing Education Unit (CEU)" means ten contact hours of participation in and successful completion of an organized and approved continuing education experience. College credit in approved courses may be substituted for CEUs on an equivalency basis as defined in this rule.
- I. "Direct Responsible Charge (DRC)" means active on-site charge and performance of operation duties. The person in direct responsible charge is

generally a supervisor over wastewater treatment or collection who independently makes decisions affecting all treatment or system processes during normal operation which may effect the quality, safety, and adequacy of treatment of wastewater discharged from the plant. In cases where only one operator is employed, this operator shall be considered to be in direct responsible charge.

J. "Executive Secretary" means the Executive Secretary of the Water Quality Board.

K. "Grade Level" means any one of the possible steps within a certification category of either wastewater collection or wastewater treatment. There are four levels each for collection and treatment system operators, Grade I being the lowest and Grade IV the highest level. There is one level for lagoon operators.

L. "Grandfather Certificate" means a certificate issued to an operator, without taking an examination, by virtue of the operator meeting experience and other requirements in R317-10-11.G of this rule.

M. "Operating Experience" means experience gained in operating a wastewater treatment plant or collection system which enables the operator to make correct supervisory, operational, safety, and maintenance decisions affecting personnel, water quality, public health, regulatory compliance, and wastewater works operation, efficiency, and longevity.

N. "Operator" means any person who is directly involved in or may be responsible for operation of any wastewater works or facilities treating wastewater.

O. "Population Equivalent (P.E.)" means the population which would contribute an equivalent waste load based on the calculation of total pounds of B.O.D. contributed divided by 0.2. This calculation may be used where a significant amount of industrial waste is discharged to a wastewater system.

P. "Restricted Certificate" means a certificate issued upon passing the certification examination when other requirements have not been met.

Q. "Small Lagoon System" means a wastewater lagoon system designed to serve fewer than 3500 design population equivalent.

R. "Wastewater Works" means facilities for collecting, pumping, treating or disposing of sanitary wastewater.

R317-10-5. Wastewater Works Owner Responsibilities.

A. The chief operator and supervisors who make process decisions for the system must be certified at the level of the facility classification. All other operators in direct responsible charge must be certified at no less than one grade lower than the facility classification or at the lowest required facility classification except as provided in B below. All facilities must have an operator certified at the facility level on duty or on call. If a facility or system undergoes a re-rating, all operators considered to be in DRC must be certified at the appropriate level within one year after notification of the new rating.

B. Upon termination of employment of the Chief Operator, considered in DRC, the Executive Secretary must be notified within 10 working days by the facility owner. The wastewater works must have a certified operator or an operator with a restricted certificate at the appropriate level within one year from the date the vacancy occurred. If the wastewater works is newly

constructed, a certified operator or an operator with a restricted certificate at the appropriate level must be employed within one year after the system is deemed operable. ~~[It is recommended that during the time no certified operator is employed, a certified operator be on call to assist as needed in the operation of the wastewater works.]~~

C. Those required to be certified may operate a system with a restricted certificate of the required grade[7] for up to one year for a Class I or Class II facility, or up to two years for a Class III or Class IV facility, but may not continue to operate a system if they are unable to obtain an unrestricted certificate at the end of the stipulated period.

D. Contracts

1. General. In lieu of employing a DRC operator as part of its workforce, a facility owner may enter into a contract for DRC services with an operator certified at the appropriate level, or with another public or private entity with operators certified at the appropriate level.

2. Any such contract must be reviewed and approved by the Executive Secretary.

3. If the contract is with another entity, it must include the names of the certified individuals who will be in direct responsible charge of the operation of the facility. At a minimum the contract must contain the following elements:

a. A clear description of the overall duties and responsibilities of the facility owner and the responsibilities of the contracted DRC operator(s) related to the supervision of the facility's operation, including the frequency of visits and the duties to be performed.

b. Identification of the contract period and effective date of the contract

c. Consideration

d. Termination clause

e. Execution by authorized signatories

R317-10-6. Facility Classification System.

[A.] Treatment plants and collection systems shall be classified in accordance with Table 1.

TABLE 1
FACILITY CLASSIFICATION SYSTEM

FACILITY CATEGORY		CLASS			
		I	II	III	IV
Collection (1)	Pop. Served	3,500 and less	3,501 to 15,000	15,001 to 50,000	50,001 and greater
Treatment Plant (2)	Range of Fac. Points	30 and less	31 to 55	56 to 75	76 and greater
Small Lagoon	Design Pop.	3,500 and less			

Systems(3) Equiv.

(1) Simple "in-line" treatment (such as booster pumping, preventive chlorination, or odor control) is considered an integral part of a collection system.

(2) Treatment plants shall be assigned "facility points" in accordance with Table 2 "Wastewater Treatment Plant Classification System".

(3) A combined certificate shall be issued for treatment works/collection system operation.

TABLE 2
WASTEWATER TREATMENT PLANT CLASSIFICATION SYSTEM

Each Unit process should have points assigned only once.

Item	Points
SIZE (2 PT Minimum - 20 PT Maximum)	
Max. Population equivalent (PE) served, peak day(1)	1 - 10
Design flow average day or peak month average, whichever is larger(2)	1 - 10
Variation in raw waste:(3)	
Variations do not exceed those normally or typically expected	0
Recurring deviations or excessive variations of 100 - 200% in strength and/or flow	2
Recurring deviations or excessive variations of more than 200% in strength and/or flow	4
Raw wastes subject to toxic waste discharges	6
Impact of septage of truck-hauled waste	0 - 4
PRELIMINARY TREATMENT	
Plant pumping of main flow	3
Screening, comminution	3
Grit removal	3
Equalization	1
PRIMARY TREATMENT	
Clarifiers	5
Imhoff tanks or similar	5
SECONDARY TREATMENT	
Fixed Film reactor trickling filters, RBC's	10
Activated sludge	15
Stabilization ponds w/o aeration	5
Stabilization ponds w/aeration	8
TERTIARY TREATMENT	
Polishing ponds, wetlands for advanced waste treatment	2
Chemical/physical advanced waste treatment w/o secondary	15

Chemical/physical advanced waste treatment following secondary	10
Biological or chemical/biological advanced waste treatment	12
Nitrification by designed extended aeration only	2
Ion exchange for advanced waste treatment	10
Reverse osmosis, electrodialysis for advanced waste treatment	15
Advanced waste treatment chemical recovery, carbon regeneration	4
Media Filtration	4
ADDITIONAL TREATMENT PROCESSES	
Chemical additions (2 pts./each for max. Of 6 pts.)	2 - 6
Dissolved air flotation (for other than sludge thickening)	8
Intermittent sand filter	2
Recirculating intermittent sand filter	3
Microscreens	5
Generation of oxygen	5
SOLIDS HANDLING	
Solids conditioning	2
Solids thickening	5
Anaerobic digestion of solids	10
Utilization of digester gas for heating or cogeneration	5
Aerobic digestion of solids	6
Evaporative sludge drying	2
Mechanical dewatering of solids	8
Solids reduction (including incineration, wet oxidation)	12
On-site landfill for solids	2
Solids composting	10
Land application of biosolids by contractor	2
Land application of biosolids under direction of DRC operator	10
Disinfection: [0-]	10
Chlorination or ultraviolet irradiation	5
Ozonation	10
Effluent discharge: (0-10 pt max.)	
Mechanical Post aeration	2
Direct recycle and reuse	6
INSTRUMENTATION (0-6 Pt. Max.)	
Use of SCADA, similar instrumentation systems to provide data with no process operation	0
Use of SCADA, similar instrumentation systems to provide data with limited process operation	2
Use of SCADA, similar instrumentation systems to provide data with moderate process operation	4
Use of SCADA, similar instrumentation systems to provide data with extensive/total process operation	6

Laboratory Control: (0-15 pt. Max))	
Bacteriological/biological (0-5 pt. Max)):	
Lab work done outside the plant	0
Membrane filter procedures	3
Use of fermentation tubes or any dilution method (fecal coliform determination)	5
Chemical/physical (0-10):	
Lab work done outside the plant	0
Push-button, visual methods for simple tests (i.e. pH, settleable solids)	3
Additional procedures (ie, DO, COD, BOD, gas analysis, titrations, solids volatile content)	5
More advanced determinations (ie, specific constituents; nutrients, total oils, phenols)	7
Highly sophisticated instrumentation (i.e., atomic absorption, gas chromatography) 1-10	10

(1) 1 pt. per 10,000 P.E. or part; maximum of 10 points

(2) 1 pt. per MGD or part

(3) Key concept is frequency and/or intensity of deviation or excessive variation from normal or typical fluctuations; such deviation may be in terms of strength, toxicity, shock loads, inflow and infiltration, with point values ranging from 0 - 6.

(4) Key concept is the degree of dilution provided under low flow conditions with point values ranging from 0 - 6.

(5) Key concept is to credit laboratory analyses done on-site by plant personnel with point values ranging from 0 - 20.

R317-10-7. Qualifications for Operator Grades.

A. General

1. "Qualification Points" means total of years of education and experience required. All substitutions are year for year equivalents. A college "year" is considered 45 quarter hours or 30 semester hours of credit.

2. College-level education must be in a job-related field to be credited. However, partial credit may be given for non-job related education at the discretion of the Council.

3. Experience may be substituted for a high school education or a graduate equivalence degree in Grades I and II only.

4. Education may be substituted for experience, as specified below.

B. Grade I - 13 points required

1. Twelve years education (one point per year).

2. One year operating experience (one point per year).

3. Experience may be substituted for all or any part of the education requirements, on a one-to-one basis.

4. Education may not be substituted for experience.

C. Grade II - 14 points required

1. Twelve years education (one point per year)

2. Two years operating experience (one point per year)

3. Up to one year of additional education may be substituted for an equivalent amount of operating experience.

4. Experience may be substituted for all or any part of the education requirement, on a one-to-one basis.

D. Grade III - 16 points required

1. Twelve years education (one point per year)

2. Four years operating experience (one point per year)

3. Up to 2 years of additional education may be substituted for an equivalent amount of operating experience. Relevant and specialized operator training may be substituted for education requirement, where 25 CEUs is equivalent to 1 year of education.

4. At least one year of the operating experience must have been at a Class II facility or higher.

E. Grade IV - 18 points required

1. Twelve years education (one point per year)

2. Six years operating experience (one point per year)

3. Up to 2 years of additional education may be substituted for an equivalent amount of operating experience. Relevant and specialized training may be substituted for education where 25 CEUs equal 1 year of education.

4. At least two years of the operating experience must have been at a Class III facility or higher.

R317-10-8. Council.

A. Members of the Council shall be appointed by the Board from recommendations made by interested organizations including the Department of Environmental Quality, Utah League of Cities and Towns, Water Environment Association of Utah, the Professional Wastewater Operators Division of the Water Environment Association of Utah, the Utah Rural Water Association, Utah Valley State College, and the Civil/Environmental Engineering Departments of Utah's universities. The Council shall serve at the discretion of the Board to oversee the certification program.

B. The Council shall consist of eight members as follows:

1. Three members who are operators holding valid certificates. At least one shall be a wastewater collection system operator.

2. One member with three years' management experience in wastewater treatment and collection, who shall represent municipal wastewater management

3. One member who is a civil or environmental engineering faculty member of a university in Utah.

4. One non-voting member who is a Senior Environmental Engineer in the Division of Water Quality or other duly designated person who shall represent the Board.

5. One member from the private sector.

6. One member representing vocational training.

C. Voting Council members shall serve as follows:

1. Terms of office shall be for three years with two members retiring each year (except for the third year when three shall retire).

2. Appointments to succeed a Council member who is unable to serve his full term shall be for the remainder of the unexpired term.

3. Council members may be reappointed, but they do not automatically succeed themselves.

D. Each year the Council shall elect from its membership a Chairman and Vice Chairman.

E. The duties of the Council shall include:

1. Preparing and conducting examinations for the various grades of operators, and issuing and distributing the certificates.

2. Regularly reviewing the certification examinations to ensure compatibility between the examinations and operator responsibilities.

3. Ensuring that the certification examinations and training curricula are compatible.

4. Distributing examination applications and notices.

5. Receiving all applications for certification and evaluating the record of applicants as required to establish their qualifications for certification under this rule.

6. Maintaining records of operator qualifications and certification.

7. Preparing an annual report for distribution to the Board and other interested parties.

F. A majority of voting members shall constitute a quorum for the purpose of transacting official Council business.

R317-10-9. Application for Examination.

Prior to taking an examination, an applicant must file a formal application of intention with the Council, accompanied by evidence of qualifications for certification in accordance with the provisions of this rule on application forms available from the Council.

R317-10-10. Examination.

A. The time and place of examinations to qualify for a certificate shall be determined by the Council. All examinations shall be graded and the applicant notified of the results. Examination fees shall be charged to cover the costs of testing.

B. Normally, all examinations for certification shall be written. However, upon request an oral examination will be given. Such examination shall be conducted by at least two Council members in a manner that will ensure the integrity of the certification program.

C. In the event an applicant fails an exam, the applicant may request to review the exam within 30 days following receipt of the exam score. The Council shall not review examination questions for the purpose of changing individual examination scores. However, questions may be edited for future examinations. If an error is found in the grading of the exam, credit may be given.

R317-10-11. Certificates.

A. All certificates shall indicate one of the following grades for which they are issued.

1. Wastewater Works Operator - Grades I through IV.

2. Wastewater Works Operator - Restricted Grades I through IV.

3. Wastewater Collection System Operator - Grades I through IV.

4. Wastewater Collection System Operator - Restricted Grade I through IV.

5. Small Lagoon System Operator - Grade I Wastewater Works/Collection System Combined.

6. Small Lagoon System Operator - Restricted Grade I Wastewater

Works/Collection System Combined.

B. An applicant shall have the opportunity to take any grade of examination higher than the classification of the system which he or she operates. A restricted certificate shall be issued if the applicant passes the exam but lacks the experience or education required for a particular grade.

An unrestricted certificate shall be issued if the applicant passes the exam and the experience and education requirements appropriate to the particular grade are met. Restricted certificates shall become unrestricted when the appropriate experience and education requirements are met and a change in status fee is paid. A restricted certificate does not qualify a person as a certified operator at the grade level that the restricted certificate is issued, until the limiting conditions are met, except as provided in R317-10-5. Upon application, a restricted certificate may be renewed subject to the conditions in C below. Replacement certificates may be obtained by payment of a duplicate certificate fee.

C. Certificates shall continue in effect for a period of up to three years unless revoked prior to that time. The certificate must be renewed each three years by payment of a renewal fee and submittal of evidence of required CEUs. The certificates expire on December 31 of the last year of the certificate. Operators considered in DRC must renew by the expiration date in order for the wastewater works to remain in compliance with this rule. Request for renewal shall be made on forms supplied by the Council. It shall be the responsibility of the operator to make application for certificate renewal.

D. An expired certificate may be reinstated within three months after expiration by payment of a reinstatement fee. After three months, an expired certificate cannot be reinstated, and the operator must retest to become certified. The required CEU[+]s for renewal must be accrued before expiration of the certificate.

E. CEUs must be earned during the 3 year period prior to the expiration date of the certificate.

F[~~E~~]. The Council may, after appropriate review, waive examination of applicants holding a valid certificate or license issued in compliance with other certification plans having equivalent standards, and issue a comparable Utah certificate upon payment of a reciprocity fee.

If the applicant is working in another state at the time of application, or has relocated to Utah but has not yet obtained employment in the wastewater field in Utah, a letter of intent to issue a certificate by reciprocity may be provided. When the applicant provides proof of employment in the wastewater field in Utah, and meets all other requirements, a certificate may be issued.

G[~~F~~]. A grandfather certificate shall be issued, upon application and payment of an administrative fee, to qualified operators who must be certified (chief operators, supervisors, or anyone considered in direct responsible charge). The certificate shall be valid only for the wastewater works at which the operator is employed as that facility existed on March 16, 1991. The certificate may not be transferred to another facility or person. If the facility undergoes an addition of a new process, even if the facility classification does not change, or the collection system has a change in rating, the respective operator must obtain a restricted or unrestricted certificate within one year as specified in this rule. Grandfather certificates shall be issued for a period of up to three years and must be renewed to remain in effect.

Renewal shall include the payment of a renewal fee and submittal of evidence of required CEUs. The renewal fee shall be the same as that charged for renewal of other certificates. The grandfather certificate shall be issued if the currently employed operator:

1. Was a chief operator or person in direct responsible charge of the wastewater works on March 16, 1991; and
2. Had been employed at least ten years in the operation of the wastewater works prior to March 16, 1991; and
3. Demonstrates to the Council his capability to operate the wastewater works at which he is employed by providing employment history and references.

R317-10-12. CEUs and Approved Training.

A. CEUs shall be required for renewal of each certificate according to the following schedule:

TABLE 3
REQUIRED CEUs FOR RENEWAL OF EACH CERTIFICATE

OPERATOR GRADE	CEUs REQUIRED IN A 3-YEAR PERIOD
Grade I	2
Grade II	2
Grade III	3
Grade IV	3

B. All CEUs for certificate renewal shall be subject to review for approval to ensure that the training is applicable to wastewater works operation and meets CEU criteria. Identification of approved training, appropriate CEU or credit assignment and verification of successful completion is the responsibility of the Council. Training records shall be maintained by the Council.

C. All in-house or in-plant training which is intended to meet any part of the CEU requirements must be approved by the Council. In-house or in-plant training must meet the following general criteria to be approved:

1. Instruction must be under the supervision of an instructor approved by the Council.

2. An outline must be included with all submittals listing subjects to be covered and the time allotted to each subject.

3. A list of the teacher's objectives must be submitted which documents the essential points of the instruction ("need-to-know" information) and the methods used to illustrate these principles.

4. No more than one-half of required CEU credits over a three year period following issuance of a certificate shall be given for registration and attendance at the annual technical program meetings of the Water Environment Association of Utah, the Water Environment Federation, Rural Water Association of Utah, or similar organizations.

5. Training must be related to the responsibilities of a wastewater works operator. If a person holds two wastewater operator certificates (treatment and collection), [~~they may receive~~] CEU credit may be received for each certificate from one training experience only if the training is applicable to each certificate. It is recommended that at least one-half the required CEU[+]s be

technical training directly related to the job duties.

R317-10-13. Appeals of Decisions of the Council.

Any person may request a hearing before the Council of an action or decision by the Council affecting that person. The person must file the request within 90 days of the Council's decision. The hearing will be at a time and location set by the Council. If the affected party does not agree with the decision of the Council after the hearing, an appeal may be made to the Executive Secretary of the Board for a hearing before the Board. Notice of the appeal must be filed with the Executive Secretary of the Board within 30 days of the final action of the Council. All appeals should be submitted to: Wastewater Operator Certification Council, Division of Water Quality, Department of Environmental Quality, State of Utah, Salt Lake City, Utah 84114-4870.

R317-10-14. Certificate Suspension and Revocation Procedures.

A. Prior to the Council's recommendation to the Executive Secretary of the suspension or revocation of a certificate, the individual shall be informed in writing of the reasons the Council is considering such action and allowing the individual an opportunity for a hearing before the Council.

B. Grounds for suspending or revoking an operator's certificate may be any of the following:

1. Demonstrated disregard for the public health and safety;
 2. Misrepresentation or falsification of figures and/or reports submitted to the State;
 3. Cheating on a certification exam;
 4. Falsely obtaining or altering a certificate;
- or
5. Gross negligence, incompetence or misconduct in the performance of duties as an operator.

C. Suspension or revocation may result where it may be shown that circumstances and events relative to the operation of the wastewater works were under the operator's jurisdiction and control. Circumstances beyond the control of an operator shall not be grounds for suspension or revocation action.

D. Following an appropriate hearing on these matters, the Council may recommend that the Executive Secretary take formal action.

E. Any suspension or revocation decision by the Executive Secretary may be appealed to the Board. Written request for a hearing before the Board must be filed with the Executive Secretary within 30 days of the decision.

R317-10-15. Noncompliance.

A. Noncompliance with these Certification rules is a violation of Section 19-5-115 Utah Code Annotated.

B. Cases of noncompliance shall be referred to the Board for appropriate enforcement action.

KEY: water pollution, operator certification, wastewater treatment
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